

Amendments To The Claims:

Please amend the claims as shown. Applicants reserve the right to pursue any cancelled claims at a later date.

1.-5. (canceled)

6. (currently amended) A gas chromatograph arrangement, comprising:

a gas chromatograph of the type which analyzes a substance mixture fed into a carrier gas stream;

a separation device for separating materials of a substance mixture into groups passing through the separation device;

a detector for non-destructively detecting arrival of the separated materials, the detector outputting a peak corresponding to every detected group of material separately passing through the separation device;

an evaluation device arranged downstream of the detector for generating a signal responsive to each peak evaluating detector signals generated by the detector;

a controllable inlet valve; and

a mass spectrometer, wherein the gas chromatograph is connected via the controllable inlet valve to the mass spectrometer arranged downstream of the gas chromatograph, wherein the inlet valve is connected to an output of the separation device;

an outlet coupled to the gas chromatograph for selectively releasing portions of the carrier gas so as to not enter the mass spectrometer, wherein

the detector is arranged in-line between an output of the separation device and the inlet valve, and wherein

the evaluation device is configured to control the inlet valve for selectively feeding each group of separated predetermined materials into the mass spectrometer based on the peaks generated by the detector and otherwise releasing the carrier gas so as to not enter the mass spectrometer evaluated detector signals.

7. (previously presented) The gas chromatograph in accordance with claim 6, wherein the detector comprises a measurement path through which the substance mixture passes of which the cross-sectional dimensions at least approximately correspond to the cross-sectional dimensions of the separation device.

8. (previously presented) The gas chromatograph in accordance with claim 7, wherein the detector is a heat conductivity detector.

9. (previously presented) The gas chromatograph in accordance with claim 8, wherein the heat conductivity detector comprises heat resistors arranged in a bridge circuit, wherein two heat resistors lie diagonally opposite one another in two different halves of the bridge being arranged in the measurement path.

10. (currently amended) A method for gas chromatographic analysis of a substance mixture, the method comprising:

directing the substance mixture for separation of the materials contained within it by means of a carrier gas through a separation device at the output of which the separated materials spatially separated in groups arriving are introduced for quantitative determination via a controllable inlet valve into a mass spectrometer, there being an alternate outlet for release of the carrier gas; and

detecting the separated materials by a detector arranged in-line between the output of the separation device and the inlet valve and, as a function of the detection, the inlet valve being controlled for introduction of all detected predetermined materials into the mass spectrometer, the inlet valve and alternate outlet otherwise controlled to admit all carrier gas into the alternate outlet instead of the mass spectrometer.

11. (currently amended) A gas chromatograph, comprising:

a separation device for separating materials of a substance mixture passing through it into separated groups;

a detector for detecting the separated groups of materials in a non-destructive manner and providing a detector signal each time a group of materials is detected; and

an evaluation device arranged downstream of the detector for evaluating detector signals generated by the detector, wherein the gas chromatograph is adapted to be connected via a controllable inlet valve to a mass spectrometer arranged downstream of the gas chromatograph, wherein the inlet valve is connected to an output of the separation device, wherein the detector is arranged in-line between the output of the separation device and the inlet valve, and wherein the evaluation device controls the inlet valve for feeding predetermined a group of materials into the mass spectrometer whenever on the base of evaluated a detector signals is generated indicating presence thereof and otherwise not permitting entry of carrier gas into the mass spectrometer.